

MONTANA AERONAUTICS COMMISSION



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Director's Column



In my opinion a sound statement worthy of repetition is the following article by Congressman, John Bell Williams, of Mississippi, "Cub Planes Are Launch Pads", printed in the November issue of *National Aeronautics*.

"We talk nonchalantly about flying airplanes, 4,100 miles per hour, 50 miles above the earth. Space pilots are orbiting the earth at more than 17,000 miles an hour. We are working overtime getting ready to fly to the moon.

This is fine, and I am all for it. We are living in the space age. But while we are doing all of this, I hope that we don't lose sight of what went on before, and what made much of this possible—the old-fashioned airplane. I am sure any pilot would love to have a crack at the controls of the X-15—I would—but I guess I came along just a little too late. The Cub type plane is more my speed.

There are more than 70,000 of these and other types of general aviation aircraft flying today. In our eagerness to reach the moon, and to top the Soviet Union's

space efforts, I hope we will not forget the Piper Cubs, Beech Bonanzas, Cessnas, Aero Commanders, Mooneys and others. We need these and the new ones to follow.

We also need airports as modern and convenient as are our turnpikes and freeways. We need improved airways and newer air traffic control and communications equipment.

I am concerned about the gap between the 70-mile-an-hour Cubs and the 17,000 mile-an-hour space capsules. There must be closer coordination from the tree tops up, if we are to advance all elements of flight in proper proportion. The X-15 pilots and some of our astronauts were launched into flight by planes of the Cub class. Their young and eager replacements must be steered into the pilot pipeline now."

Aeronautics Commission Staff Member Honored

Richard J. (Dick) Munroe, Safety and Education Officer, for the Montana Aeronautics Commission has been elected an Honorary Member of the National Aero Club, with headquarters at Ann Arbor, Michigan.

Gordon T. Jeffers, President of National Aero Club, in announcing the award, said it was in recognition of Munroe's contributions to the advancement of general aviation.

Montana Flying Farmers And Ranchers Report

ERMAL HANSEN, President

The following is a report of our October business meeting of the Montana Flying Farmers and Ranchers Association, and a list of their new officers.

President, Ermal Hansen, Fort Benton, Montana.

Vice-Pres., Earl Keister, Conrad, Montana.

Sec.-Treas., Rosella Tempero, Worden, Montana.

Directors

Arnold Sorenson, Kremlin, Montana.

Leonard Sorenson, Bozeman, Montana.

Morten Mortenson, Circle, Montana.

Henry Wood, Gildford, Montana.

Woodrow McCracken, Ledger, Montana.

The Montana Flying Farmers feel Montana has need for additional facilities that require spending in proportion to both the added utility requirements, and the numbers of aircraft per unit of population. Farm and ranch aircraft operations are essential. These include not only range and field use, but business and personal travel. While trips may be to one or another of major cities, they are frequently directed to or from small communities. Emphasizing these aspects of gen-

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R. J. (Dick) Munroe, Editor

ARTCRAFT  PRINTERS

eral aviation, the agricultural picture from spraying and dusting to personal travel, we can review some of the requirements.

Looking into FAA's tabulation of ACTIVE CIVIL AIRCRAFT by STATE and COUNTY, the need for general aviation facilities in these areas, of which Montana is representative, is measured. While all areas have the necessity of increasing and improving services for aviation, each have some special requirements.

For comparisons, in this publication, the number of active aircraft is expressed as a ratio to 10,000 population. The national average is 3.5 per ten thousand persons. Montana shows 14.2 or four times the average. In Chouteau County with an agriculture population of 6,000, there are 41 aircraft, or an average of 66 per ten thousand. This is nearly twenty times the national ratio. There are no complications of average hours of operation per year, but a reasonable estimate in this would substantially enlarge some of the comparative measurements. So, as with our national highways program, we invite all to travel and enjoy, gain in the added business and productivity; but these regions must show higher expenditures when spending is related to population.

It was our opinion that what we needed was more strips to be located adjacent to highways, near small towns or communities, with attention directed to the placement of emergency strips in

mountainous terrain. Correlated with the latter, although not directly within this topic, was the minimal retention of LF ranges or H transmission adequate to maintain some low altitude navigation. Considering type of equipment flown, climate and soil conditions, many of these strips could be sod, some would not even require grading, beyond surface level.

While there has been no opportunity to review in detail the operation of admirable programs such as Bill Schulte established in Oklahoma, it was concluded that we would direct our attention to similar local situations. We would have the Montana State Highway and Aeronautics Commissions cooperate in locating and acquiring land, in easements and purchases, and offering contracts. This would be valuable where there was road building in the area and the contractor could reasonably be expected to be able to offer substantial costs savings to build suitable aircraft strips or landing areas. All costs, however, are to be segregated so that the funds of the Commissions remain separate and distinct.

Exam-O-Gram No. 6

PREFLIGHT PLANNING FOR A VFR CROSS-COUNTRY FLIGHT:

1. WHAT IS THE PURPOSE IN FILING A VFR FLIGHT PLAN? It is excellent insurance and costs nothing but a few minutes of your time. The information in your flight plan will be used in search and rescue operations in the event of an emergency, so make it accurate. An examination of enroute accidents shows an inordinate relationship between the number of accidents by aircraft not on flight plans as compared to those that do file a flight plan.

2. HOW, WHEN, AND WHERE SHOULD A VFR FLIGHT PLAN BE FILED? Pilots are urged to file in person or by telephone to the nearest FSS prior to departure. Radio should be used for filing plans only when it is impossible to file in person or by telephone to avoid congestion on the

already busy communications channels. When filing by telephone or radio, have all the necessary information written down in the order it appears on a flight plan so that you will utilize the least amount of the controller's time and release the telephone circuit or radio frequency for someone else.

3. WHAT MUST YOU DO TO USE THE VFR FLIGHT FOLLOWING SERVICE? You must first have a functioning two-way radio in your airplane, the duration of the proposed flight must exceed one hour; and your route must be such that suitable flight watch stations are available. Then you must file a VFR flight plan with the nearest FSS, request VFR Flight Following Service, and receive a thorough pre-flight briefing from FSS personnel. The briefer will give you enroute and destination weather, forecasts, winds-aloft, NOTAMS, and will designate the flight watch stations which you should contact. After take-off, report your "off time" directly to the FSS. Contact each flight watch station designated by your FSS briefer as you pass over it and they will have the latest pertinent information all ready for you. When you reach your destination, BE SURE TO FILE AN ARRIVAL NOTICE.

CAR, Part 60.20 states that "If a flight plan has been filed, the pilot in command of the aircraft, upon landing or completion of the flight, shall file an arrival or completion notice with the nearest FSS station or control tower." Pilots are urged to file arrival notices with the nearest FSS when practical to reduce congestion on control tower communications channels.

4. WHAT IS RECOMMENDED BY GOOD OPERATING PRACTICES? Except for the preflight action required in CAR 60.11 and filing an arrival or completion notice, the other procedures above come under good operating practices. Whether you file a flight plan or not, make regular position reports to FSS stations so that search and rescue action, if necessary, can be focused within the proper area. These FSS contacts

will enable them to give you pertinent Flash Advisories and current altimeter settings, and upon request, they will provide complete information on weather conditions, status of airports, and nav aids. Monitor the scheduled broadcasts made by these stations.

BE SAFER WITH A FLIGHT PLAN.

AIRPORT NOTES



By **JAMES H. MONGER**
Chief, Airports Division

As 1962 draws to a close we find it is a good time to review a few facts about Montana Airports. This year will be known as a very significant one as far as airport development goes. It has been a slight year for actual project completions, but a tremendous year for the formation of new policies and procedures, thereby creating an unsurpassed potential for the coming years in airport construction.

There were nine projects completed in 1962, five of which were major reconstruction jobs utilizing local, state and federal financing. The remaining four were not as extensive, but just as important, using local and state money.

The nine completions were at Bozeman, Chinook, Deer Lodge, Glasgow, Hogeland, Livingston, Miles City, Red Lodge and Schaefer Meadows.

Preliminary engineering and planning is now underway on airports to build or rebuild during the 1963 season. Next year the Airport Division of the Montana Aeronautics Commission expects to be directly involved in the construction of 34 airport projects.

The locations are as follows: Geraldine, Great Falls, Butte, Tiber, Hardin, Big Sandy, Harlem, Roundup, West Yellowstone, Plentywood, Whitefish, Augusta,

Boulder, Poplar, Hamilton, Helena, Polebridge, Hysham, Dillon, Havre, Glendive, Billings, Broadus, East Glacier, Ekalaka, Kalispell (City Field), Lavina, Philipburg, Rapelje, Richey, Ryegate, Wibaux and Winnett. There is a slim possibility that some of the above will not materialize, but even a greater possibility that other airport projects, now unknown, will develop that we are not aware of at this time.

Montana has 113 municipal or public used airports, and approximately 350 Flying Farmer airstrips. Even with this impressive statistic, we have great need to improve our public airports and add a few new ones for the improvement of our network of airports state wide. There are some Flying Farmer and Rancher airstrips that are in better condition than many municipal fields. We are now in the process of helping counties and communities improve their airports to a higher standard.

Some airport statistics are: 15 Airline Airports, 36 Paved Airports, 53 Lighted Airports.

Continuous Weather Broadcasts Praised By 99's

Weather Bureaus, part of the U. S. Department of Commerce, have been serving aviation for a long time, continually expanding and up-grading their service through the years. Their latest service for pilots is another example of the interest they take in pilots' weather problems.

Almost every pilot has experienced the frustration of being caught at an airport in questionable weather where there is no FSS station, no Weather Bureau, and the nearest VOR station is beyond range of his VHF receiver. Many pilots base their planes at small strips without any of these conveniences, and have often been forced to call long distance for weather information.

The new weather service, called Continuous Transcribed Weather Broadcasts, is available from five Montana FAA stations and can be received on low-frequency bands either in aircraft or by

transistor portables with 200-400 KC band receiver. These five cities and their frequencies are as follows:

Great Falls—	371 KC
Missoula	308 KC
Bozeman	329 KC
Billings	400 KC
Miles City	320 KC

The broadcasts contain **aviation forecasts** for a circular area about station, **winds aloft forecasts**, and **latest hourly weather reports** for stations in the area. This is carried out on a twenty-four hour basis. There is no worry about getting old information, as the forecast portion is changed, depending upon the area served by the station, at least four times a day and the sequences are changed every hour.

Let's use Bozeman for example. (Other stations' schedules may vary.) If you are located anywhere within a hundred mile radius of Bozeman, you can tune to 329KC anytime during the day or night and get the latest weather for your area. Forecasters in the Helena Weather Bureau office make out forecasts for the Bozeman area, and put them on the direct teletype to Bozeman, where they are immediately transcribed and put on continuous broadcast. New weather forecasts arrive in Bozeman thirty minutes before sunrise (convenient for flight planning purposes), at 10:00 a.m., 2:00 p.m., and 8:00 p.m. Sometimes, rapidly changing conditions necessitate earlier than scheduled forecast revisions. Of course, regular changes are made on the type to include hourly sequence reports for area stations.

The first station in Montana to begin this service was Great Falls about eighteen months ago. Since then, the other four have been commissioned, the last one being Missoula, in September, 1962. The Weather Bureau in Billings serves Billings and Miles City; Great Falls by Great Falls Weather office; Missoula weather office serves Missoula; and the Helena office serves Bozeman.

The usefulness of this service was well illustrated the week-end of the Big Sky Race. For days prior to the race, women pilots had haunted the weather offices trying to follow the trends. The

day before the race, anxiety focused on a frontal system on the West Coast. The Helena office of the Weather Bureau was designated to handle weather forecasts for the start and a large portion of the route, since the Bozeman area is served by this office. Mr. Richard Dightman, meteorologist in charge, and his staff, composed of Rd M. Rauch, Robert L. Schmidt, Wm. B. Downs, R. Clark Neilson, and Lyle Haight, watched the developing weather picture very closely. By the evening before the race, they were fairly certain that the front would have moved through the area during the night, leaving behind it strong winds and turbulence. Their forecast was very accurate, as any one of the women who flew the race will testify. This information was teletyped directly to Bozeman, and by 5:45 a.m. the race contestants were being briefed on the forecast. This rapid, current service was much appreciated by everyone flying that day.

Every pilot in Montana will be better informed, and thus safer, as a result of using Continuous Transcribed Weather Broadcast service. Have you tried it yet?

Mary Jo Janey

ACCIDENT PREVENTION



BERNARD A. GEIER

FAA Safety Agent, Billings

SINGLE ENGINE OPERATION

Maximum performance during single-engine operation cannot be gained when flying with the wings level. With the wings level, all the rolling and turning tendency must be controlled by using aileron and rudder against the roll. The deflection of the control surfaces creates drag which reduces the airspeed and the lift

By lowering the wing with the operating engine, lift from the wings will counteract the roll into the dead engine. The result is that less rudder and aileron is needed and, therefore, less drag and more aircraft performance. The wing should be held 5 degrees down for maximum performance.

EMERGENCY PROCEDURES

We recommend that the emergency procedures that are published by the aircraft manufacturer be used. Procedures should be practiced so that they become a normal reaction, but care should be exercised that you do not make mistakes such as feathering the engine that is operating. It gets real quiet when the good engine is feathered and the other engine is already dead. Try to analyze the reason for each step of the procedure.

SINGLE-ENGINE APPROACHES

A single-engine approach should be made at the same air speed as when making a normal two-engine approach. If the approach is made with a high airspeed, the chance of a single-engine go-around is reduced. This is caused by the kinetic energy that results from a fast approach. Kinetic energy is the resultant of speed and weight. For a given weight, the higher the speed the greater the kinetic energy. In the case of the aircraft, the lift from the wings is used to counteract the kinetic energy to stop the descent. It is necessary to stop the descent for a landing or for a go-around. If the kinetic energy is great, you will be unable to develop enough life to stop the descent, therefore, you will be unable to make a go-around. You can prove this to yourself at altitude by establishing a descent at normal speed and initiating a single-engine go-around to determine the amount of altitude loss necessary. Go back to the same altitude and enter a fast airspeed approach attitude and see the altitude loss necessary. A normal final approach for any aircraft should be 1.4 times V_{so} . You will remember that V_{so} is the stalling speed in landing configuration. If your aircraft, be it a single or multi-engine aircraft, stalls with

gear and flaps down at 70 m.p.h., your approach speed should be 1.4×70 or 98 m.p.h. Your speed as you cross the fence should be 1.3 times V_{so} . In the above example it would be 1.3×70 or 91 m.p.h. Speed in excess of this amount will create more work on the flareout due to the higher kinetic energy. You will have more trouble with hitting on the nose wheel if you approach at a faster than 1.3 speed.

New Rules Proposed

A major overhaul of certification and operating requirements for air taxi and commercial operators of small aircraft has been proposed by the Federal Aviation Agency.

These operators currently must comply with Civil Air Regulations Part 42—"Irregular Air Carrier and Off Route Rules." This arrangement has not been satisfactory, however, since it results in the operation of large and small aircraft under the same regulation. The FAA, therefore, has proposed a new regulation to apply specifically to the operators of small aircraft.

The proposed new rules provide for issuance of a single "Air Taxi-Commercial Operator (ATCO) Operating Certificate" of indefinite duration instead of separate certificates for each class. Under the present regulations, commercial operators of small aircraft are not required to have an operating certificate.

Each holder of an ATCO certificate would be required to have the exclusive use of at least one aircraft that meets the requirements for at least one kind of activity authorized in his operations specifications. However, he would not be required to have exclusive rights to every aircraft that he uses.

Qualifications for pilot-in-command would include a requirement that he hold a currently-effective instrument rating in order to conduct VFR (Visual Flight Rules) night passenger flights. This is believed necessary because use of instruments may be required to escape from unpredicted adverse weather conditions or to maintain flight control on dark nights.

Use of an autopilot system in lieu of a second pilot in IFR (Instrument Flight Rules) operations would be allowed, subject to any conditions or limitations needed for safety. The autopilot, however, would have to be a three-axis type and manufactured under an FAA Technical Standard Order.

Passenger flights in IFR conditions in aircraft, unable to meet regular IFR enroute performance requirements, also would be permitted, provided weather conditions along the planned route permit the flight to be made VFR below the ceiling should the pilot so choose. A similar provision would be applicable to certain VFR over-the-top flights.

In issuing the proposed new rules, the FAA is withdrawing Civil Air Regulations Part 47, which was adopted in December 1958 to cover air taxi and small aircraft commercial operators, but never put into effect. A proposed revision of Part 47 also was circulated for industry comment in August 1960, but final action was never taken.

Comments on the new proposed rules (Part 125 of the Federal Aviation Regulations) will be accepted until January 25, 1963, at the Dockets Section, Federal Aviation Regulations) will be accepted until January 25, 1963, at the Dockets Section, Federal Aviation Agency, Washington 25, D.C.

FEDERAL AVIATION AGENCY INSPECTION ITINERARY

AIRPORT	DECEMBER	
Butte	*	**
Culbertson		6
Gallatin Field (Belgrade)	12	11
Glasgow Airport	5	5
Glendive Airport	19	19
Great Falls	6	5
International		
Havre		
Helena City-County	3-10-17	
Lewistown Airport	27	27
Logan Field (Billings)	3-10-17-24-31	
Miles City	21	20
Missoula	19	18

*Written Test Only

**Flight Test Only

MONTANA TOWER-CONTROLLED AIRPORT OPERATIONS FOR NOVEMBER

	Total Operation	Instrument Operation
Billings	7,220	
Great Falls	6,173	1,023
Missoula	2,604	262
Helena	1,833	68

Operators Corner



PHIL, BETH AND MARIA TIMM

Operator of the month is Phil Timm of Timm's Aero Service at Polson.

The Timm family moved to Casper, Wyoming, in 1933, from Kansas City, Missouri, and Phil began his flying career in 1936 while in high school. He built his own plane with a Model A engine and had close to 1500 hours before he legally soloed. His first instructor was a woman and he still thinks she's one of the best.

In 1941, he obtained A&E licenses while working for Inland Air Line (now part of Western) in Cheyenne, Wyo. During the early part of World War II, and while still a youngster of 23, he supervised a crew of 120 men in a Pre-Glider School at Goodland, Kansas, and later held the same position of Superintendent of Maintenance in a WTS School in Fort Collins, Colorado.

He served with the Air Force in the European Theatre as a member of a Troop Carrier Command. Following the war, aviation became a secondary occupation for awhile when he became engaged in another business.

In 1956, he was requested to be a temporary airport "caretaker", following the death of the operator in Polson, and finally found himself involved in a full time operation.

Timm's Aero Service includes mechanical work, major and minor repairs, and overhaul, he holds an authorized Mechanics Inspector's Rating, Flight Instruction, which also includes seaplane and multiengine. He has the only commercially operated seaplane in Montana, which is kept on Flathead Lake, Air Taxi into

the Wilderness Area and also Fire Patrol work.

The Agricultural work is operated on the field by C. S. Webb, using DBA Farm-Air Chemicals. He has 80 and 100 octane standard fuel, hangar space and tie-downs. There is a snack bar in the office lounge; and there are cafes, motels and hotels a mile and a half east of the airport. He also deals with used aircraft.

This is strictly a family operation, which includes his wife Maria, son Glenn and daughter, Elizabeth. Glenn is now a Junior at MSU and plans on a law career.



GLEN TIMM

He holds a private license and seaplane rating and is now working on his commercial. He has been active throughout high school and college vacations helping with the family business. He now does most of the pickup and delivery work, ferrying, etc., which he likes, and is assistant mechanic, which he dislikes. He was allowed to solo only after he had passed his private written examination.

Elizabeth is now 15 years old and is considered the best looking "lineboy" in the state. When a plane lands at Polson, she often does a fast change from ballet slippers (she also teaches dancing), to shoes suitable for gas ladders. She is learning to fly and does most of the radio and navigation while flying with dad or brother. These two "kids" are a familiar flying pair around the state.

Phil's wife Maria is a native of Wyoming, and acts as airport hostess, office girl and general "Girl Friday" for their family operation. She held a parachute

riggers license during World War II, and while "Mom" was packing chutes at Fort Morgan and Fort Collins, Colorado, infant son, Glenn, was sleeping on the adjoining packing tables.

An active booster for beautiful Flathead Valley, Phil has served a term as President of the Chamber of Commerce, is a Rotarian, and for the last six years has been an active member in the Civil Air Patrol Cadet Program. Besides his busy family, and his flying, he enjoys traveling, making movies and archery when he can find the time.

M.P.A. REPORTS

State President

First of all, I would like to bring to your attention the complete list of officers in the MPA. Russ Lukens, Great Falls, Vice-Pres.; Directors, C. D. Markle, Glasgow; John Vance, Helena; Winifred Lovelace, Bozeman; Phyllis Sammons, Cut Bank, Secretary; and myself. They have been real active and cooperative in MPA work this year, and I am very happy to have them to work with. We met for our first meeting this past month, and hope to have more like it this winter.

Second, I would like to remind you that dues are now due for 1963. You hangars might be interested to know that Billings has asked for 400 membership cards for their membership drive. This should be a challenge to all of the other hangars.

We had a directors meeting in Helena to coincide with the monthly meeting of the Montana Aeronautics Commission, after which we met with them and discussed the marking of strips and aviation in general throughout the state.

I will be appointing committees very soon and will try to get participation from all of the hangars.

For the first time in my flying career, my plane has been in the hangar for a week at a time while I try to tie up the loose ends on my fall farm work. Culbertson and Livingston are in the process of organizing hangars. I am waiting word from them as to when

I'll be able to present them their charters.

On behalf of the officers and the board of directors of the MPA, we wish you all a very Merry Christmas, and may a Peace and Goodwill toward men continue to remain over the earth.

—Herb Sammons

Cut Bank Hangar

Cut Bank Hangar sponsored an MPA Day on October for the townspeople—free coffee, pop and donuts, and free rides for anyone who so desired. Nine local pilots donated their time and planes. The club bought the gas and they gave 349 rides from 1:30 'till 6 when a northerly front called a halt to things. Over 500 people were on the field during the day and the Conrad Sky Divers gave us a wonderful performance. We had some money left from the state convention, and felt this was a good way to further the cause of private aviation. We termed it a huge success. The morning started off in Montana tradition—windy and gusty, but about 11 a.m. the wind shifted to the north and cut down to about 12 m.p.h. and gave us an ideal day.

National Aero Club Promotes Check Ride Program

Bob Crawford, National Aero Club (2311 Shelby Ave., Ann Arbor, Mich.) provides these questions and answers on the NAC voluntary proficiency check rides:

1. Who will give the check rides? The pilot desiring a check ride would select any certificated instructor or flight school.

2. What material will be included in the check ride? A suggested check ride form will be drawn up by a committee of qualified persons having the best obtainable advice from all areas of general aviation, including manufacturers, FAA, pilots' organizations, operators' groups, etc. The actual check rides will undoubtedly differ in accordance with the needs and desires of the pilot being checked, the philosophy of the instructor, and the type of aircraft used.

3. What will happen to the re-

sults of the check ride? The check ride report form will be completed by the instructor and given to the pilot at the conclusion of the ride. This is part of what he is paying for. The information reported on will be confidential and will be strictly under the control of the pilot.

4. Will the FAA have anything to do with the program? The FAA will have no official part whatever in the project.

5. Will insurance companies give credits or rate reductions to pilots taking check rides? Airway Underwriters, the National Aero Club company, will definitely take check rides into consideration in the underwriting of aircraft insurance. It may reasonably be expected that other companies will eventually follow suit.

6. Wouldn't a voluntary check ride program serve as a preliminary step to proficiency regulations being imposed by FAA? No. The subject of proficiency qualifications has been considered by the government for many years. If anything, a successful voluntary program would deter FAA action.

7. What incentives will be used to encourage pilots to take check rides? Operators participating under the program will be furnished with materials for distribution to pilots, posting on bulletin boards and release to local newspapers. Each pilot taking a check ride will be furnished by NAC with a card certifying to the fact that he has taken a check ride, with the date, type of aircraft, instructor and other pertinent information. Operators will be encouraged to publish or post names of pilots who hold check ride cards.

8. How often should check rides be taken? It depends on the amount of flying done, the experience and ability of the pilot, the type of aircraft flown, and other considerations. For the average private pilot, flying single engine aircraft, it is believed that an annual ride would be a reasonable objective.

9. How much do check rides cost? This of course depends on the rates for dual instruction of the individual school or instructor, giving the rides, the length

of the ride, the type of equipment used, and possibly some other factors. However, excluding the cost of operating the aircraft, it is believed that most check rides could be taken for from \$5 to \$10.

10. How would check rides answer the problem of the VFR pilot getting caught in instrument conditions? Giving a check ride would enable most instructors to at least mention something about the importance of instrument training, and it seems likely that this contact might lead in many cases to the pilot taking some instrument instruction.

11. Since check rides are available now on a voluntary basis, why is it necessary to do anything about a check ride program? Pilots are not being encouraged to take check rides. The NAC program will point up and emphasize the importance of check rides and provide a definite plan or pattern under which check rides can be given on a national scale.

12. Would any instruction be given on a check ride? Probably very little. It is generally agreed that the main purpose of the check ride is to discover weaknesses, bad habits, or incorrect practices, and to make recommendations for corrective action. Obviously, in many cases additional dual will be suggested.

FOR SALE: 1952 Tri-Pacer O SMOH. VHT-3 with Fiat pack. Full panel, excellent fabric, always hangared. Capt. Fisher, 1925 5th St., N.W. Riverview Ter., Great Falls, Mont.

FOR SALE OR TRADE: Stinson 108-1, 600 hrs. SMOH, 1957 fabric, two gyros, VHF Transmitter and LF Receiver, Spinner, Pants, clean, sharp, \$2750. Also, Cessna 170A, metal wings, 2 radios, 175 hrs., SMOH, spinner, clean and good, \$3950. Call 586-6792 or write Ray Sammons, 1207 Gopher, Bozeman.

FOR SALE: CESSNA 140, all metal, TT A & E 700 hrs., jump seat, new battery and glass primary panel, new VHF trans. and rec., 5 xtals, like new, Leo Gaub, 1222 Hauser Blvd., Helena.

FOR SALE OR TRADE: 1948 Ryan Navion, 295 hrs. on 205 Cont. since major, good clean airplane, full panel, ADF & Superhomer. Spare high time 205 Cont. & Hartzell prop comp. sell with airplane or separately. Will consider a clean camping trailer to Tote Goat as partial payment. Roland Dasenbrock, 1907 34th St., Missoula, Mont.

Congratulations !!



CERTIFICATES ISSUED RECENTLY TO MONTANA PILOTS

Johnson, Henry I., Terry—
Student
Weaver, Warren Elmer, Winnett
—Student
Thirud, Sven, Sidney—Private
Johnson, Donald Kermit, Plenty-
wood—Student
Winward, Robert Wayne, Billings
—Private
Ralston, William Robertson, Orin-
da, Calif.—Instr. on Private
Dunlap, Robert Louis, Great Falls
—Multiengine on Comm.
Jackson, Cecil Curtis—Gillett,
Wyo.—666 on Flt. Instr.
Boyett, Roy, Billings—Student
Stube, Richard Hurrell, Glendive
—Student
Jones, James William, Billings—
Private
Klingler, Russell Arthur, Glasgow
—Private
Wold, Duane Richard—Glendive
—Comm.
Smith, Brandon Corder, Glasgow
AFB—Instr.
Oglesby, Garry Jay, Peerless—
Student
Sukut, Herbert Clinton, Glendive
—Private
Saddler, Harley Lee, Plevna—
Student
Jaeger, William Peter, Tioga,
N.D.—Student
Saddler, Hazel Laura, Plevna—
Student
Carden, Edwin Lyle, Hardin—
Student
Anderson, Leroy Hilton, Billings
—Multieng. on Comm.
Chandler, William Henry, Plenty-
wood—Student
Bailey, Chestetr Roy, Worland,
Wyo.—Student
Krug, Charles David, Glendive—
Student
Karch, John Jr., Baker—Student
Ryder, Buck Ormsby, Froid—
Student
Bertus, Clifford Warren, Lewis-
town—Student
Markos, George Theros, Powder-
ville—Student

Thatcher, Frank Phillip, Billings
—Private
Jacobsen, Hans Olsen, Cody, Wyo.
—Reissue Private
Keeler, Arthur C., Jr., Lewistown
—Reissue Private
Christensen, Ray K., Powell, Wyo.
—Student
Fraser, Joseph Philo, Lewistown
—Student
Creek, Lloyd D., Billings—
Student
Simpson, Robert Claude, Moore—
Flight Instr.
Carlson, Floyd John, Lewistown—
Airframe on Mech.
Anderson, Dwight Dean, Lewis-
town—Student
Stratton, William Glenn, Billings
—Private
Klier, Robert Allen, Billings—
Private
Evans, Chester R., Powell, Wyo.
—Student
Beck, William Hamilton, Poplar—
Private
Rundle, Robert Paul, Glasgow—
Private
Titus, Richard Lyn, Glasgow AFB
—Student
Thyne, John Robert—Glasgow—
Student
Sherman, Dennis Eugene,
Glasgow AFB—Student
DeBruycker, Rudy P., Dutton,
Mont.—Private
McClain, George W., Columbia
Falls, Mont.—Private
Dees, Jay W., Hamilton, Mont.
—Student
Fairhurst, George D., Honolulu,
Hawaii—Student
Masters, James P., Butte—
Student
Howard, John L., Choteau—Blue
Seal Comm. & Flt. Instr.
Airplane
Carson, Peter Alex, Bozeman—
Student
Goodykoontz, Jon E., Cody, Wyo.
—Student
Cowger, Ronald I., Douglas, Wyo.
—Student
Slack, Jerry L., Kalispell—
Student
Pearson, Darrell A., Fairfield—
Studeant
Glantz, Gary W., Roberts—
Private
Harper, Jack R., Helena—Private
Guerrera, Melvin P., Missoula—
Flt. Instr.—Rotorcraft
Williss, William B., Dillon—
Student

Vickrey, John W., Belgrade—
Student
Lueck, Joy K., Bozeman—Student
Hansen, Arthur L., Missoula—
Student
Hutchinson, Carl A., Dillon—
Student
Dion, Donald J., Great Falls—
Student
Young, Thomas E., Great Falls—
Student
Etzwiler, James A., Townsend—
Student
Tag, Palmer L., Missoula—Para-
chute Rigger
Scott, Philip J., Bozeman—
Student
Harkins, Jack W., Big Timber—
Student
Cote, Albert L., Big Timber—
Student
Stevlinsong, Donald L., Great
Falls—Student
Bronec, Joseph T., Butte—
Student

Yuhas, Raleigh D., Bozeman—
Student
Centers, Jack B., Hamilton—
Student
Rudolph, Lewis M., Butte—
Student
Eadie, Lloyd D., Bozeman—
Student
Grant, Ralph S., Missoula—
Private
Hamby, Danny B., Malmstrom
AFB—Student
Dayton, Dean A., Great Falls—
Student
McGuire, Stonwall, Drummond—
Student
Johnson, Gordon R., Florence—
Private
Roth, Kenneth, Missoula—Grum-
man F7F added to ATR, AMEL,
DC-3 with Com. priv. ASEL,
Ford 5, DC-2, Grumman TBM
and Rotorcraft
Ambrose, Arthur Neal, Butte—
Private

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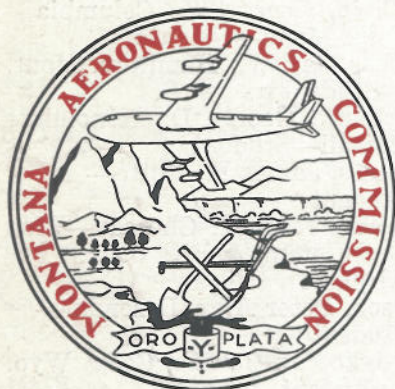
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